CLAIMS

What is claimed is:

1. A method of switching on an inductive load, a current of which is intended to repeatedly reach an end current value at desired time, comprising the steps of:

a. measuring a time interval between a switching on time of the inductive load and a time that at least one intermediate current value of the current through the inductive load is reached;

b. using the time interval measured in said step a. and the at least one intermediate current value to calculate an end current time interval from the switching-on time until the end current value is reached; and

c. performing a switching-on of the inductive load at the end current time interval before the desired time.

2. The method of claim 1, wherein said step b. comprises using a function representing the rate of current rise in the inductive load when a constant voltage is applied for calculating the end current time interval.

3. The method of claim 2, wherein said step b. includes querying a memory for determining the function representing the rate of current rise.

4. The method of claim 2 wherein said step b. includes calculating the function representing the rate of current rise from at least one intermediate current value and the

time interval between a switching-on time and the time at which at least one intermediate current valve is reached.

5. The method of claim 1, where said step b. comprises using the time interval measured in said step a. to calculate at least one parameter of a function and using the function, the at least one parameter and the end current valve to calculate the end current time interval.

6. The method of claim 5, wherein the function used in step b. comprises:

$$i = \hat{i}\,(1-e^{-t.R/L})$$

wherein:

i is the current at a time t;

$\hat{i}$ is the current reached at infinity;

R is the resistance; and

L is the inductance.

7. The method of claim 2, wherein the function used in said step b. is stored as a table including a plurality of intermediate current values assigned to corresponding values of end current time intervals.

8. The method of claim 3, wherein the function used in said step b. is stored as a table including a plurality of intermediate current values assigned to corresponding values of end current time intervals.

9. The method of claim 4, wherein the function used in said step b. is stored as a table including a plurality of intermediate current values assigned to corresponding values of end current time intervals.

10. The method of claim 2, where step b. further includes determining a correction value representing a curvature of the function and calculating the end current time interval in accordance with the rule of three using the correction value.

11. The method of claim 1, wherein said step b. comprises calculating the end current time interval in accordance with the rule of three.